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ABSTRACT

In an internationally competitive training environment, implementation of Total Quality Management (TQM) in vocational education can provide a comparative advantage in preparing the type of work force required for micro and macro economic reforms. The concept of TQM can be used as a management tool to improve the standards of vocational training. Before a quality assurance program can be established in vocational training, stakeholders must agree on what the quality plan is intended to achieve. A Technical and Further Education (TAFE) system must have a felt need, management commitment, an organizational culture, and a strategic plan in place to make improvements in vocational training through TQM. Quality planning is vital for an effective, self-sustaining, and manageable quality improvement process. For a TAFE system, this process may include: (1) commitment to quality at all levels within the organization and especially at senior management level; and (2) the identification of key areas of nonconformance and willingness to take corrective action. Standards are guides against which quality programs can be defined, implemented, and audited. They are important in identifying, comparing, contrasting, and making continuous improvement in TQM. Internal or external standards or a combination could be used as part of the implementation of TQM. (Contains 21 references.) (YLB)

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IMPLEMENTING TOTAL QUALITY MANAGEMENT IN VOCATIONAL EDUCATION

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IMPLEMENTING TOTAL QUALITY MANAGEMENT

IN VOCATIONAL EDUCATION

ABSTRACT

In an internationally competitive training environment, implementation of Total Quality Management (TQM) in vocational education can provide a comparative advantage in preparing the quality workforce required for micro and macro economic reforms. Understanding TQM may be easy but its implementation is not. However, if we have a common understanding about TQM then the implementation of quality concepts into the provision of vocational training is made easier. This position paper describes how the concept of TQM can be used as a management tool to improve the standards of vocational training. It characterises the common indices of nonconformance in vocational training and the initial implementation of TQM within a vocational education system. The paper describes the importance of the continuous management commitment and planned approach to achieve success in implementing TQM in vocation training. This paper points out that everything a vocational training institution provides and how it is provided, can be improved to the greater satisfaction of its customers. It concludes that vocational training institutions that are quality driven will foster innovation and improvement and thus they can have a strategic advantage in the provision of quality training.

Introduction

In this era of customer-driven demand for quality products (goods and services), there is a need for vocational training to focus on management by quality objectives (MBQO). In this context, quality should be pursued by training providers in order to generate excellence in aspects of vocational preparation. Such quality efforts will provide opportunities for customers to make full use of training opportunities and help them and the training providers achieve national objectives with regard to skill formation for the 21st century and beyond. Adopting quality management techniques should pave the way for TAFE training initiatives to produce a more competent and better skilled workforce. In Australia, several state TAFE authorities have developed goals and strategies for improving the quality and quantity of vocational and further education and the major impetus for the introduction of quality concepts has been built into their strategic plans. Thus, quality as a concept is becoming an increasingly important part of planning, operations, and management.

Total Quality Management and Vocational Training

Total Quality Management (TQM) is a management approach that focuses on quality as the key to overcoming nonconformance in meeting the requirements of customers (Samson & Sohal, 1990; Lammermeyr, 1990). It incorporates the fundamentals of good management practice, customer focus, education and training, communication, continuous improvement, participation, costing, planning, organisational development, and management involvement. It advocates that quality is everybody's responsibility and continuous efforts should be made to pursue quality improvement. From a vocational training perspective, quality means that courses and their standards are appropriate to the award and that the methods adopted in delivering the courses are relevant. TQM provides a significant opportunity for enhancing vocational training through continuous improvement. However, TQM cannot be achieved if the stakeholders have different ideas of what it means and how it works.

TQM is a broad system of checks and balances of all aspects of an improvement program from its origin as a structure to its delivery as a process and to its results as an outcome (Harwood & Pieters, 1990; Tattersall, 1989). In vocational training systems, quality has always been tacitly assumed within the delivery system, but very little has been done about it explicitly. There is a strong belief among practitioners that the application of quality is the road map to success in preparing a quality work force through on-the-job, off-the-job, preservice and inservice programs. Quality can be identified, assured, and assessed in vocational training through TQM which itself includes quality assurance and quality improvement. Before a quality assurance program can be established in vocational training, there must be agreement with what the quality plan is intended to achieve. According to Pall (1987), quality planning must include setting objectives, planning, an implementation strategy, and control. For a TAFE system, this process may include the following:

Identification of key indices of nonconformance in meeting the requirements of customers and initiation of corrective action.

Establishment of commitment by senior management by making quality the basis for overcoming nonconformance.

Development of standards and criteria to structure, process, and maintain outcomes for quality management.

Allocation of the system and resources to support the process of quality development.

Development of an attitude of "everyone in the organisation is a customer" and "everyone contributes" to programs and services offered to customers.

Development of targeted policy, planning, and operations which create a movement for the development of self-sustained management in the TAFE system for continuous improvement in quality.

Accordingly, there has to be a felt need, management commitment, an organisational culture, and a strategic plan in place before it is possible to make improvements in vocational training through TQM. Apart from the internal customers, who are common to all processes and systems, TAFE colleges have two distinct external customers: industry and students. The proposed plan should acknowledge all customers, both internal and external. All activities in the delivery of TAFE programs and services can be improved through focussing on customers.

Planning for Total Quality Management

Successful implementation of TQM will not happen accidentally. There is no magic formula to success. To achieve quality, it must be planned, implemented, and managed. Quality planning is vital for an effective, self-sustainable, and manageable quality improvement process (Russell, 1991). Such planning can be done at different levels within a vocational training organisation and at a variety of levels across the organisation. For example, planning can be done at the level of a division or department, across a whole college, throughout a region, state or at a national level depending on the point of implementation. The implementation could be as broad or as limited as an organisation chooses to make it (Nicholson & Moss, 1990).

One of the most successful methods applied in TQM is the concept of the quality plan (Schobert & Brown, 1990). A quality plan is defined as a "document setting out the specific quality practices, resources and sequence of activities relevant to a particular service" (Stebbing, 1989, p.20). Thus a quality plan is the quality assurance scheme developed for a program or project. It includes a quality manual, contract, procedures manual, and inspection and audit plan. It is a plan of action that aims at excellence in order that a program may be developed. It is generally developed by an organisation for the internal control of quality and to indicate appropriate activities, acceptance criteria, and hold points (Pall, 1987). Planning could help to set the direction, to assess priorities, and to evaluate the strengths and weaknesses of implementing TQM. Thus, all initiatives toward the improvement of quality in vocational training should have a quality plan as a basis for implementation, auditing and reporting.

The TAFE system already has the basic elements necessary for quality management and for improvement based on quality planning. What is required is the development of a corporate quality culture throughout the organisation. The introduction of TQM will be facilitated by strengthening the existing quality elements and then expanding to TQM through continuous quality improvement. For this purpose, management should adopt TQM with a positive approach to achieving results. It is believed that TQM can be implemented into the TAFE system with minimum additional resources. However, success will depend largely on two aspects: (i) commitment to quality at all levels within the organisation and especially at senior

management level, and (ii) the identification of key nonconformances and a willingness to take corrective action.

First Step in Implementation

Quality improvement consists of three stages (Pall, 1987): commitment, consolidation, and maturity. Each stage requires a management system, prevention, control, and appropriate process management procedures. The commitment stage consists of an introduction and an initial implementation of quality management. The first step in the introduction phase is to formulate and publish a policy statement on quality outlining senior management's commitment to quality. The policy must make it clear that quality is everyone's responsibility, including the office staff, administrators, service personnel, and above all, line managers (Gibson, 1990). The introduction phase is associated with the preparation of documents such as customer requirements, service specifications, quality policy, process planning, and process certification. The initial implementation phase reflects the readiness of the entire organisation to begin quality improvement efforts. It is also characterised by the early completion of basic process-related education and training. Initial implementation offers an excellent opportunity for the recognition of innovation and leadership during the introductory phase.

As a part of the first step in implementation, attention must be paid to communication. An organised, genuine, and simple communication process will contribute immeasurably to the success of the implementation of TQM (Varian, 1991). According to Varian, establishing a clear goal, providing a plan of action, developing a document with guidelines, providing examples of TQM in action, using existing internal communication channels, arming management to deliver the total quality message, and reporting process achievements could be used to introduce TQM to the personnel within an organisation.

Management Commitment and Continuous Implementation

TQM needs time and perseverance to produce incremental effects in its implementation. There is no short-cut to success in quality improvement. TQM in vocational training is intended to have an impact on customer service, on the curriculum and on the ownership of the quality initiatives. This is intended to provide direction for co-ordinating existing activities and developing new quality initiatives in vocational training. The primary intention of TQM must be to create and sustain continuous improvement in the quality provision of vocational training. For this reason, active participation of its stakeholders may take the form of: questioning policy or processes, making data-based decisions, demanding accurate up-to-date knowledge, and removing barriers to delivering or acquiring that knowledge. TQM can facilitate the development

of quality in the vocational training curriculum. In this regard, effort should be directed to two aspects: development of courses with due regard to quality elements and standards, and the application of quality techniques for continuous improvement. In order for this to occur curriculum designers and teachers themselves need to be trained in quality concepts. A system has to be in place to review the curriculum continuously and managers must plan for quality to ensure that high standards of training are provided.

Senior management in the vocational training system must lead the process of implementation by emphasising a common understanding of quality and the need to change. Management has the responsibility for removing the barriers that prevent quality being achieved and for ensuring that their actions reflect the integrity of the quality improvement process. Visible and ongoing commitment and involvement by management will effectively enhance the promotion of TQM. Implementation of quality improvement will not happen without that commitment (Wall & Zeynel, 1991). Gibson (1990) suggests that management is the "85% factor", and there is no substitute for real commitment and action from the top. If managers do not make changes to manage quality as a most important task, the quality improvement effort simply will not work. Management cannot delegate its responsibilities and such responsibilities do not end with the appointment of a person or team to carry out the quality function. Good quality can only come from good management. Quality is essentially a management issue and management must be prepared for both the best and the worst during the implementation of TQM. TQM recognises the limitations that can be placed on quality by management. It is management that can make it either a success or a failure. Therefore, management must plan, do, correct, and act (PDCA) to ensure its success.

Systematic and Continuous Implementation of TQM

TQM must be implemented in stages and an implementation plan usually consists of several interrelated components and activities: a statement of quality policy, an organisational structure, training and education, and a time-table for implementation (Stebbing, 1989). Implementing quality improvement involves substantial organisational change and when embarking on a major effort to implement continuous quality improvement in vocational training, the following actions are to be considered:

Aim for real improvement and keep procedures as simple as possible.

Prepare a systematic plan to describe how the quality improvement effort will be managed along with the on-going demand of the operation.

Provide appropriate orientation, training, and learning opportunities for everyone in the system.

Analyse the current situation to understand what changes are needed. Allow people enough time to adjust to change, but also move fast enough to sustain a sense of progress.

Design methods to audit, learn from, and stabilise the new quality improvement processes by identifying the barriers and taking corrective actions.

TQM in the TAFE sector cannot be overemphasised. Sound quality management practices initially will demand a lot of time, human resources, funding, support from industries, unions, learners, providers, professional associations, and government (Kacker, 1988). However, at this point, senior management should begin to ask a new set of questions: What would it be like around here if we did things right the first time? What is the pay-off in attacking nonconformance in meeting customer requirements? How good can we be using quality as a management tool? What do we have to do now to make continuous improvement through quality management? What did we gain and what did we lose? and Where do we go from where we are now? Honest answers to these questions provide the basis for a realistic assessment of the need for TQM.

Indices of Nonconformance

Every organisation encounters quality problems. A measure of such problems can be established through identifying the key elements of nonconformance in the organisation. From a vocational training point of view, the following could be key indices of nonconformance:

Absence of ongoing commitment by senior management
Costs arising from rework, duplications, and other waste
Dissatisfaction of students
Decline in enrolments
Dissatisfaction of employers and industry
Duplication of functions
Inefficient use of equipment and space
Graduate placement rates
Lack of recognition of the customer in the plan for implementing TQM
Lack of competencies of graduates
Lack of demand for courses
No personnel in the organisation with assigned responsibilities for quality
Student withdrawal from courses

Strategies to identify nonconformance associated with vocational training could range from simple observation to highly sophisticated statistical methods. Cause-and-effect diagrams, Pareto charts, histograms, control charts, correlation charts, and cost-benefit analyses could be used to identify nonconformances (Waldron & McCormick, 1990; Pimblott, 1990). Statistical methods help to pinpoint whether quality improvements are to be achieved by changing the procedures used or by tackling one-off influences or causes (Pall, 1987). The use of statistical

techniques provides objective feedback on quality issues. Any such strategies can result in one or more or a combination of activities being found undesirable. Nonconformance can be part of any stage in the process of vocational training. It is important to identify key nonconformances since the corrective measures differ according to their type. If there is no clear understanding of nonconformance, there can be no simple mechanism to control them.

Using Standards

Standards are guides against which quality programs can be defined, implemented, and audited. They are important in identifying, comparing, contrasting and making continuous improvement in TQM. Internal or external standards or a combination of both could be used as part of the implementation of TQM. In any case, every activity or performance must be tied to the selected standard. The vocational training system represents an opportunity to implement TQM using both service and manufacturing-based standards. Very simply stated, this means establishing achievement standards, auditing achievement against the standards, and then establishing a process for continuous improvement that can be based on external standards. Accordingly, an appropriate AS/NZ3900 series could be used as a basis for quality assurance in vocational training. However, there is no requirement for an organisation to implement the standard unless it is required to do so by a customer's order or contract. On the contrary, training authorities can establish their own internal standards for implementing TQM. When quality is viewed as conformance to a standard, it becomes clear that the achievement of quality depends upon each and every person, from top manager to student, performing his/her part to the level of the standards. It is not really a question of whether to use a standard or not, but more a question of which standard to use.

In Australia, the TAFE authority in Western Australia is not using any external standards as a part of its quality improvement program, but the TAFE authority in South Australia is using the AS/NZ3901 standard to build quality improvement into its vocational training. Again, it is a management choice. Regardless of the type of standard selected, quality improvement systems can be achieved through quality concepts such as TQM. It is important to note that improvement requires organised and systematic effort. Juran (1991) argues that a formal committee is needed to initiate and coordinate the quality implementation strategy; a process is needed for making continuous improvement; a team must be organised to develop an organisational quality culture; and an audit process is needed to monitor progress. Accordingly, quality improvement efforts are a lot of work and require commitment of time, money, materials, and human resources.

Summary and Conclusion

Quality improvement in vocational training can be achieved by doing it right the first time, next time, and every time. A quality workforce for the 21st century can be achieved only through the provision of quality vocational training programs and such programs must be continuously sought. A quality initiative can begin anywhere in the TAFE system, so long as there is strong and visible leadership and management support. Successful implementation of TQM requires that senior management take initiative to improve management style, leadership, and management processes.

With a new emphasis on training for a quality workforce, the TAFE system must shift its focus from assuming quality to understanding it and then implementing it. The provision of less than satisfactory training will not contribute to the national objective of a skilled quality workforce. With a proper plan, quality should begin as more than conformance to specification, fitness for use, or even customer satisfaction, but rather as a vision of what is possible and as an awareness of a spontaneous impulse to express values and ideals in vocational preparation. It should begin with shaping the training of our future needs for a quality workforce. We will know the quality workforce for what it truly is - the visible and tangible expression of excellence in vocational training.

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